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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hiroatsu Endo

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EXAMINER

COOLMAN, VAUGHN

ART UNIT

PAPER NUMBER

3618

MAIL DATE

DELIVERY MODE

12/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,738	Applicant(s) ENDO, HIROATSU	
	Examiner VAUGHN T. COOLMAN	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 9 is/are rejected.
- 7) ☒ Claim(s) 3,8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by

Tabata et al (U.S. Patent No. 5,833,570).

[claim 1] Tabata discloses a control apparatus for a drive apparatus of a hybrid vehicle, in which a motor (14) is connected to an output member (19) connected to a main power source (12) through a torque transmitting member (B2) whose torque capacity is changed according to a hydraulic pressure command value, comprising:

Maintaining means (156) for maintaining a rotational speed of the motor at a predetermined rotational speed;

Changing means (146) for continuously changing the hydraulic pressure command value from zero (prior to ‘shift-up command’ in FIG 19) while the maintaining means maintains the rotational speed of the motor at the predetermined rotational speed (see FIG 19 between ‘determination of shift-up action’ and ‘initiation of inertia phase’); and

Learning means (160) capable of learning a relationship between output torque of the motor for maintaining the rotational speed of the motor at the predetermined rotational speed and the hydraulic pressure command value when the output torque of the motor reaches a predetermined value while the hydraulic pressure command value is changed.

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[claim 2] Tabata further discloses detecting means (motor ammeter 63) for detecting initial output torque of the motor (as it relates to the torque of the output shaft) while the hydraulic pressure command value is zero (as shown in FIG 19), and the predetermined value is set to a value obtained by adding predetermined torque to the initial output torque detected by the detecting means. In FIG 19, the initial motor torque must be known in order to follow the change in motor torque with respect to time. The predetermined torque is the motor torque value immediately prior to initiation of inertia phase, at the inflection point on the change of motor torque graph.

[claim 5] Examiner notes that the control method is inherent in the apparatus as rejected above in re claim 1.

[claim 6] Examiner notes that the first through third control devices as claimed are disclosed by Tabata as follows: first device is item 56; second device is item 146; third device is item 160. The remaining claim limitations are rejected as above in re claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata in view of Eguchi et al (U.S. Patent Application Publication No. US 2003/0109360 A1).

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[claims 4 and 9] Tabata discloses all of the elements of the claimed invention as described above except for the time and place of the learning process of the hydraulic pressure command value and the output torque of the motor. Eguchi teaches the desirability of setting the engaging condition of a frictionally engaging element being changed to measure initial control value at the factory [paragraph 0011]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus shown by Tabata with the adjustment of the vehicle on a production line as taught by Eguchi in order to provide the advantage of improving the overall efficiency of the vehicle prior to delivery to the end user.

Response to Arguments

Applicant's arguments filed 12/01/2009 have been fully considered but they are not persuasive.

Examiner notes that the amended claim language does not bear out the crux of the interview of 11/13/2009 between the Examiner and Applicant's representative, Daniel Shanley. Tabata does disclose that motor feedback is executed during the inertia phase. However, upon a closer reading of Tabata, he also indicates (column 25, lines 30-36) that the feedback control in step SA7 can be terminated when the terminal portion (inertia phase) of the shift-up action is initiated. Contrary to applicant's assertion that "in Tabata, the initial hydraulic pressure is not reflected in the duty ration", the learning compensation of Tabata is specifically used to compare the current performance (based on the current initial hydraulic pressure) of the duty ratio map to the previous performance (based on the previous initial hydraulic pressure). The duty ratio is adjusted based on whether the time between shift-up command and start of inertia phase is short

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enough. The feedback is constantly comparing the previous to the current and readjusting the initial hydraulic pressure to approach an optimum initial value to effect proper torque transfer without shock.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAUGHN T. COOLMAN whose telephone number is (571)272-6014. The examiner can normally be reached on Monday thru Friday, 10am-8pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-7742. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GLENN DAYOAN/
Supervisory Patent Examiner, Art Unit 3612

VAUGHN T COOLMAN
Examiner
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/V. T. C./
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